

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
18 September 2003 (18.09.2003)

PCT

(10) International Publication Number
WO 2003/076561 A3

(51) International Patent Classification⁷: C12N 9/22,
15/64, 15/90

(74) Agents: HELBING, Jörg et al.; Von Kreisler Selting
Werner, Postfach 10 22 41, 50462 Köln (DE).

(21) International Application Number:
PCT/EP2003/002280

(22) International Filing Date: 6 March 2003 (06.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02005468.0 9 March 2002 (09.03.2002) EP
60/363,797 13 March 2002 (13.03.2002) US

(71) Applicant (*for all designated States except US*):
ARTEMIS PHARMACEUTICALS GMBH [DE/DE];
Neurather Ring 1, 51063 Köln (DE).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): EDENHOFER,
Frank, Oliver, Stefan [DE/DE]; Heerstr. 5, 50374 Erft-
stadt (DE). PEITZ, Michael [DE/DE]; Peter-Bauer-Str.
13-15, 50823 Köln (DE). PFANNKUCHE, Kurt
[DE/DE]; Franz-Stryck-Str. 12, 50374 Erftstadt (DE).
RAJEWSKI, Klaus [DE/DE]; Bachemer Str. 95, 50931
Köln (DE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
22 January 2004

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: RECOMBINASE FUSION PROTEIN WITH ENHANCED CELLULAR UPTAKE

(57) Abstract: The present invention relates to a fusion protein comprising a site-specific DNA recombinase domain such as Cre recombinase, and a domain containing a specific modified nuclear localization signal. The fusion protein may further comprise a protein transduction domain such as the hydrophobic FGF and basic TAT peptide. The specific nuclear localization signal - alone, or together with the protein transduction domain - promotes the cellular uptake of the recombinase. The fusion protein is a powerful tool for efficient genetic engineering of mammalian genomes. The invention further relates to DNA sequences coding for said fusion protein, methods for producing said fusion protein and its use as an agent for inducing gene targeting in a living organism or in cultured cells.



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